

BERZHANOV, R. B.; ISLAMOV, A. A.; MIRVAKHIDOV, M. M.

"Resonance Scattering of Gamma Rays on Nuclei  $Si^{28}$ ,  $Zr^{66}$ ,  $Ce^{140}$ ."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi,  
14-22 Feb 64.

IYaF, AN UzSSR (Inst Nuclear Physics, AS UzSSR)

BERZHANOV, R.B.; KOCHARYAN, doktor-prof., nauchnyy rukovoditel'

[Interaction cross sections of the high energy  $J/\psi$ -mesons and protons with lead nuclei and production spectra of these particles; abstract of a dissertation submitted for the degree of candidate of physical and mathematical sciences] Secheniia vzaimodeistvii  $\pi$ -mesonov i protonov bol'shikh energii s iadrami svintsa i spektry generatsii etikh chastits; avtoreferat dissertatsii, predstavlennoi na soiskanie uchenoi stepeni kandidata fiziko-matematicheskikh nauk. Erevan, Erevanskiy gos.univ., 1958. 13 p. (MIRA 12:4)

1. Chlen-korrespondent AN ArmSSR (for Kocharyan).  
(Nuclear physics)

BERZHANSKIS, K.V., inzh.; Filonevich, B.P., inzh.

Using trucks in transporting concrete mixes. Gidr. stroi. 27  
no.8:45 Ag '58. (MIRA 11:9)  
(Concrete--Transportation)

L 23247-66 EWT(1)

ACC NR: AP6009150

SOURCE CODE: UR/0139/65/000/005/0128/0133

AUTHOR: Petrakovskiy, G. A.; Berzhanskiy, V. N.

ORG: Siberian Physicotechnical Institute im. V. D. Kuznetsov (Sibirskiy fiziko-  
tehnicheskiy institut)

TITLE: Contribution to the nonlinear theory of excitation of spin waves in fer-  
rites by a longitudinal microwave magnetic field

SOURCE: IVUZ. Fizika, no. 5, 1965, 128-133

TOPIC TAGS: spin wave, spin relaxation, paramagnetic relaxation, ferrite, para-  
metric resonance, microwave, magnetization

ABSTRACT: This is a continuation of an earlier study (Voprosy radioelektroniki,  
Ser. III. no. 6, 144, 1962) dealing with the determination of the relaxation pro-  
perties of spin waves by paramagnetic excitation with longitudinal magnetic micro-  
wave field. Since the theory of paramagnetic excitation has been developed only  
in the linear approximation, the authors construct in the present article a non-  
linear theory of parametric excitation of spin waves excited in ferrites by a  
microwave magnetic field polarized along the direction of the constant magnetic  
field. An equation is derived for the alternating magnetization of a ferrite

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L 23247-66

ACC NR: AR6009150

sample in the form of an ellipsoid of revolution situated in a constant magnetic field parallel to the axes of revolution. An asymptotic solution is obtained for this equation and it is shown that the first-order approximation is adequate. The conditions for parametric excitation of the spin waves are determined and the amplitude and the phase of the oscillations of the magnetization of the system are obtained for the stationary case. The frequency interval within which the parametric excitation of spin waves is determined and the stability of the stationary state under parametric-resonance conditions is investigated. The results agree with experimental data within the limits of the assumptions made, and diverge from them at high power, most likely as a result of spin-wave saturation. Orig. art. has: 3 figures and 26 formulas.

SUB CODE: 20/

SUBM DATE: 01Feb64/

ORIG REF: 002/

OTH REF: 002

Card 2/2 *AW*

SOV-98-58-8-13/22

AUTHORS: Berzhanvskiye, K.V., Filonovich, B.P., Engineers

TITLE: The Transportation of Concrete Mixtures by Automobiles  
(O perevozke betonnoy smesi avtotransportom)

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1958, Nr 8, p 45 (USSR)

ABSTRACT: In connection with an article by Yu.N. Solov'yev "Construct Automobiles for the Transportation of the Concrete" published in Nr 5 (1957) of this periodical, the author finds that many of definitions propounded by Solov'yev are unfounded. There is 1 diagram.

1. Concrete--Handling 2. Automobiles--Applications

Card 1/1

BERZMATY, I.

Five-year plan of the consolidated Stalin collective farm  
Alma-Ata, Kazakhskoe izd-vo, 1951

ALEKSEYEV, V.F.; BERZHBITSKIY, V.V.; GAYSINSKIY, A.Ya.; MGALOBLSHVILI, N.M.; TROFIMOVA, V.I.; SHTEYMAN, R.A.; OLTARZHEVSKIY, V.K., doktor arkh., zasl. deyatel' iskusstv, nauchnyy red.; VORONINA, T.V., red.; GOVALOV, O.V., red.; TEMKINA, Ye.L., red.

[Public eating places] Predpriatia obshchestvennogo pitania; posobie po proektirovaniu. Moskva, Gosstroizdat, 1963. 266 p.  
(MIRA 16:5)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut obshchestvennykh zdaniy.

(Restaurants, lunchrooms, etc.--Design and construction)

BERZHETS, G.N.

Standard series of drilling rigs. Neft.khoz. 34 no.10:1-6 0 '56.  
(Oil well drilling) (Boring) (MLRA 9:11)

BERZHETS, G.N.

Standard series of drilling rigs. Neft.khoz. 34 no.11:7-13 N'56.

(MIRA 10:1)

(Oil well drilling--Equipment and supplies)

HERZHETS, G.N.

Petroleum industry of Argentina. Neft.khoz. 35 no.2:63-67 F 157.

(MLRA 10:3)

(Argentina--Petroleum industry)

BERZHETS, G. N.

Petroleum industry of Argentina. Neft.khoz. 35 no.3:65-69 Nr 157.  
(MIRA 10:4)

(Argentina--Petroleum industry)

GLIKMAN, L.S.; BERZHETS, G.N.

Basic trends in the creation of new oil and gas drilling units.  
Neft.khoz. 37 no.2:22-31 F '59. (MIRA 12:4)  
(Boring machinery)

GLIKMAN, L.S.; BERZHETS, G.N.

Basic trends in the creation of new oil and gas drilling units  
(conclusion). Neft.khoz. 37 no.3:15-25 Mr '59.

(MIRA 12:5)

(Boring machinery)

BERZHETS, G.N.; KALASHNIKOV, N.V.

Correct terminology in petroleum literature. Neft. khoz. 39 no.9:  
61-71 S '61. (MIRA 15:1)  
(Petroleum industry--Terminology)

BERZHETS, G.N.

Lifting capacity reserve of drilling rigs. Mash. i nef't. obor.  
no.17-13 '64 (MIRA 17:7)

1. Moskovskiy Institut nef'tekhimicheskoy i gazovoy promysh-  
lennosti im. akademika Gubkina.

BERZHETS, G.N.

Basic trends in the standardization of drilling rigs. Mash. i neft,  
obor. no.8:8-10 '64. (MIRA 17:11)

1.

1. Moskovskiy ordena Trudovogo Krasnogo Znameni institut neftekhimicheskoy i gazovoy promyshlennosti im. akademika Gubkina.

BERZHETS, G.N.

Basic trends in the consolidation of drilling-rig units.  
Mash. i neft. obor. no.7:7-10 '64.

(MIRA 17:11)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti  
im. akademika I.M. Gubkina.

BERZHETS, G.N.

Rotor efficiency. Mash. i neft. cbor. no.9:7-9 '64. (MIRA 17:11)

1. Moskovskiy ordena Trudovogo Krasnogo Znameni institut nefte-  
khimicheskoy i gazovoy promyshlennosti im. akad. Gubkina.

BERZHETS, G.N.

Loads on the hook when "reciprocating" the casing string. Mash, i neft,  
ober. no.1:6-7 '65. (MIRA 18:4)

1. Moskovskiy ordena Trudovogo Krasnogo Znameni institut neftekhimicheskoy  
i gazovoy promyshlennosti im. akad. Gubkina.

NAUMOV, Georgiy Karpovich; SILAYEV, Nikolay Ionovich; STEFANOV, Nikolay Yakovlevich; USHAKOV, Pavel Semenovich; CHERNUKHA, Nikolay Timofeyevich; BERZHIGAL, Lazar' Davidovich; STARTSEV, A.N., inzh., retsenzent; KOLTUNOVA, M.P., red.; BOBROVA, Ye.N., tekhn.red.

[Economics of the work of railroad stations] Ekonomika raboty stantsii. Moskva, Vses.izdatel'sko-poligr.Ob"edinenie M-va putei soobshchenia, 1961. 262 p. (MIRA 14:6)  
(Railroads--Stations)

BERZHYNAS, Z.I., Cand Vet Sci -- (diss) <sup>the</sup> "Veins of  
~~the~~ <sup>a</sup> horse's head and their valvular apparatus with  
some consideration of age peculiarities." Kaunas, 1958  
27 pp (Min of Agr USSR. Lithuanian Agr Acad) 130 copies  
(KL, 23-58, 110)

- 108 -

BERZI, Sandor

Let us make sports popular with the hundreds of thousands of workers.  
Munka 5 no.4:68-69 Ap 155.

1. Vasas SE orszagos elnoke.

BERZILIN, M. M.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

<u>Name</u>	<u>Title of Work</u>	<u>Nominated by</u>
Berzilin, M. M.	"Trips With Domestic Plants"	State Publishing House for Children's Literature, Ministry of Education RSFSR

SO: W-30604, 7 July 1954

BERZILIN, N.M.

Forests and Forestry

Unsuccessful pamphlet ("Forest hospital." reviewed by YU. V. Rychin)  
Est. v shkole no. 3, 1952

BERZILOVA, O. V.

PA 61/49150

USSR/Medicine - Physiology - Report - Nov/Dec 48  
Mental  
Medicine - Nervous System

"Influence of the Central Nervous System on the  
Pessimism (Least Favorable Condition) of the  
Neuromuscular Apparatus," O. V. Berzilova, A. M.  
Magnitskiy, Electrophysiol Lab, Inst of Physiol,  
Acad Med Sci USSR, 6 pp

"Fiziol Zhur SSSR" Vol XXXIV, No 6

If a frog's sciatic nerve is severed while under  
pessimism condition, yet its relationship with the  
central nervous system is still intact, the cen-  
tration changes to the optimum while the muscle  
61/49150

USSR/Medicine - Physiology - Report - Nov/Dec 48  
Mental (Contd)

becomes weakened. A relative phenomenon of such  
subordination as the above can be produced by  
severing the medulla oblongata.

61/49150

BERZIN, A., inzhener.

The electric arc welding of small-diameter pipes. Zhil.-kom. khez.  
7 no.6:25 '57. (MIRA 10:10)

(Electric welding)  
(Pipe, Steel--Welding)

DONSKOY, Dmitriy Dmitriyevich; BERZIN, A.A., red.; FEKLISOVA, T.D., tekhn.  
red.

[Biomechanics of physical exercise] Biomekhanika fizicheskikh up-  
razhnenii. Izd.2., perer. i dop. Moskva, Gos.izd-vo "Fizkul'tura  
i sport," 1960. 238 p. (MIRA 14:6)  
(Movement (Physiology))

SARKIZOV-SERAZINI, Ivan Mikhaylovich, prof.; STASENKOV, V.K., prof.;  
SEYKIN, M.I., dotsent [deceased]; VASIL'YEVA, V.Ye., dotsent;  
BERZIN, A.A., red.; SHPEKTOROVA, Ye.I., tekhn.red.

[Exercise therapy] Lechebnaia fizicheskaia kul'tura. Izd.2..  
ispr. i dop. Moskva, Gos.izd-vo "Fizkul'tura i sport," 1960.  
389 p. (MIRA 13:10)

(EXERCISE THERAPY)

YAKOVLEV, Nikolay Nikolayevich, prof.; KOROBKOV, Anatoliy Vital'yevich;  
YANANIS, Stanislav Vladimirovich; BERZIN, A.A., red.; MANINA,  
M.P., tekhn. red.

[Physiological and biochemical principles in the theory and  
methodology of sports training] Fiziologicheskie i biokhimiche-  
skie osnovy teorii i metodiki sportivnoi trenirovki. 1<sup>zd.</sup>2., perer.  
i dop. Moskva, Gos.izd-vo "Fizkul'tura i sport," 1960. 405 p.  
(MIRA 14:12)

(PHYSICAL EDUCATION AND TRAINING)

LETUNOV, Serafim Petrovich; MOTYLYANSKAYA, Rakhil' Yefimovna;  
BERZIN, A.A., red.; SHPEKTOROVA, Ye.I., tekhn.red.

[Sports and the heart] Sport i serdtse. Moskva, Izd-vo  
"Fizkul'tura i sport," 1961. 39 p. (MIRA 15:4)  
(SPORTS MEDICINE)

LETUNOV, S.P., prof., otv. red.; GRAYEVSKAYA, N.D., red.; DEMBO,  
A.G., red.; SOKOLOV, A.A., red.; BUNKIN, N.A., spets. red.  
BERZIN, A.A., red.; DOTSSENKO, A.A., tekhn.red.

[Medical observations on sportsmen in the process of training] Vrachebnye nabludeniia za sportsmenami v protsesse trenirovki. Red. koll. S.P.Letunov i dr. Moskva, Izd-vo "Fizkul'tura i sport," 1963. 303 p. (MIRA 16:10)  
(SPORTS MEDICINE)

BERZIN, A.A.; STOLYAROV, G.A.; NIKOL'SKIY, Yu.V.; CHELNOKOV, I.Ye.

Fission cross section of  $U^{235}$  and  $Th^{232}$  by 14.6 Mev. neutrons.  
Atom. energ. 5 no.6:659-660 D '58. (MIRA 12:1)  
(Uranium--Isotopes) (Thorium--Isotopes)

BERZIN, A.A., inzh.; BORODIN, I.F., kand. tekhn. nauk; LUKOVNIKOV, A.V., kand. tekhn. nauk; PRONNIKOV, M.I., kand. tekhn. nauk; SERGOVANTSEV, V.T., kand. tekhn. nauk; YURASOV, V.V., kand. tekhn. nauk; BURGUCHEV, S.A., zasl. deyatel' nauki i tekhniki RSFSR doktor tekhn. nauk, prof., red.; NIKITINA, V.I., red.; SOLODENIKOVA, G.A., red.; SOKOLOVA, N.N., tekhn. red.

[Course on electric power plants, substations, and power systems] Praktikum po elektricheskim stantsiiam, podstantsiiam i sistemam. [By] A.A.Berzin i dr. Moskva, Sel'khozizdat, 1963. 303 p. (MIRA 16:12)

(Electric power plants)  
(Electric power distribution)

SOV/26-59-2-18/53

**AUTHORS:** Zemskiy, V.A., Candidate of Biological Sciences;  
Berzin, A.A.

**TITLE:** A Find of Ambergris (Nakhodka ambry)

**PERIODICAL:** Priroda, 1959, Nr 2, p 86 (USSR)

**ABSTRACT:** The authors describe finding a piece of ambergris in the stomach of a killed sperm whale (*Physeter catodon*). According to the opinion of scientists the ambergris is the product of a pathologic digestive process of the whale.

**ASSOCIATION:** Vsesoyuznyy institut rybnogo khozyaystva i okeanografii (All-Union Institute of the Fishing Industry and Oceanography - Moscow) Tikhookeanskiy institut rybnogo khozyaystva i okeanografii (Institute of the Fishing Industry and Oceanography of the Pacific Ocean - Vladivostok)

Card 1/1

BERZIN, A.A.

Method for determining the age of female sperm whales (Physeter  
catodon L.). Dokl. AN SSSR 139 no.2:491-494 JI '61. (MIRA 14:7)

1. Tikhookeanskiy ~~nauchno~~-issledovatel'skiy i stitut rybnogo  
khozyaystva i okeanografii. Predstavleno akademikom I.I. Smal'gauzenom.  
(Whales) (Age) (Dentin) (Corpus luteum)

ZEMSKIY, V.A.; BERZIN, A.A.

Rare case of atavism in sperm whales (*Physeter catodon* L.).  
Nauch. dokl. vys. shkoly; biol. nauki no.2:56-60 '61.

(MIRA 14:5)

1. Rekomendovana Vsesoyuznym nauchno-issledovatel'skim institutom  
oceanografi i rybnogo khozyaystva.  
(WHALES) (ATAVISM)

BERZIN, A.A.

Materials on the development of teeth and determination of age in sperm whales. Trudy sov. Ikht. kom. no.12:94-103 '61. (MIRA 14:6)

1. Tikhookeanskiy institut rybnogo khozyaystva i okeanografii.  
(Whales) (Teeth)

BERZIN, A.A.; TIKHOMIROV, E.A.; TROYNIN, V.I.

Is Steller's sea cow extinct? Priroda 52 no.8:73-75 Ag '63.  
(MIRA 16:9)

1. Tikhookeanskiy nauchno-issledovatel'skiy institut rybnogo  
khozyaystva i okeanografii, Vladivostok.  
(Sea cow)

YAKOVLEV, N.N., prof., doktor biol. nauk; ORESHCHENKO, N.I., prepod.;  
KARPUKHINA, Yu.L., kand. biol. nauk; ROGOZKIN, V.A., kand.  
biol. nauk; KOMKOVA, A.I., kand. biol. nauk; BERZIN, A.A.,  
MANINA, M.P., tekhn. red.

[Biochemistry] Biokhimiia. Moskva, Fizkul'tura i sport,  
1964. 246 p. (MIRA 17:2)

BERZIN, Aleksandr Alekseyevich; GABINA, Ye.L., red.; MANINA, M.P.,  
tekh. red.

[For athletes on the sense organs] Sportsmenam o<sup>1</sup> orga-  
nakh chuvstv. Moskva, Fizkul'tura i sport, 1964. 69 p.  
(MIRA 17:3)

\*

PROCESSES AND PROPERTIES INDEX

20

**Welding of Electron Castings Rejected.** A. F. Berzin (*Arsiprovizkhnost* (*Aircraft Ind.*), 1968, (1), 26-29).-- [In Russian.] The welding rx's used contained 1%, more manganese than the alloy welded, which contained 9 10% aluminium but no zinc. A mixture of barium chloride 40, sodium chloride 27, potassium chloride 13, lithium chloride 8, and sodium fluoride 12%, was used as a flux, the castings were preheated to 270-300 C., a reducing flame was used, and after welding the articles were cooled slowly in an asbestos shroud --N. A.

METALLURGICAL LITERATURE CLASSIFICATION

E-2

~~BERZIN, A.F., inzh.,~~ starshiy nauchnyy sotrudnik

New electrodes for welding metals. Gor. khoz. Mosk. 36  
no.10:46 0 '62. (MIRA 15:12)

1. Tsentral'nyy institut nauchno-tekhnicheskoy informatsii  
mashinostroyeniya.

(Electric welding)

BERZIN, A.F.

New welding equipment. Mashinostroitel' no.5:45-48 My '63.  
(MIRA 16:7)

(Welding—Equipment and supplies)

BEZIN, A.F.

Seminar on the soldering and welding of cutting tools. Stan.  
i Instr. 35 no. 4:39 Ap '64. (MIPA 17:5)

BERZIN, A.F.

Reference to the original document

Seminar on soldering and welding metal-cutting tools. Avtom. svar.  
17 no.3:95 Mr '64. (MIRA 17:11)

BERZIN, A.F., inzh.

Seminar on the brazing and welding of tools. Svar. proizv. no.3:  
42-43 Mr '64. (MIRA 18:9)

SECTION A I

KISRO, I.V., kandidat tekhnicheskikh nauk; LEBEDEV, V.A., kandidat tekhnicheskikh nauk; BERZIN, A.I., inzhener.

Welding nonrotatable, thin-walled pipe joints with carbon electrodes in an atmosphere of carbon dioxide. Avtom.svar. 10 no.3:44-50 My-Je '57. (MLRA 10:8)

1.Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki imeni Ye.G. Patona Akademii nauk USSR.

(Electric welding--Equipment and supplies  
(Pipe, Steel--Welding)

BERZIN, Anatoliy Ivanovich; ZHARIKOV, Yu.G., red.; TIMOFEYEVA, N.V.,  
tekhn.red.

[Realization of the principle of material self-interest on  
collective farms] Osushchestvlenie printsipa material'noi  
zainteresovannosti v kolkhozakh. Moskva, Gos.izd-vo iurid.  
lit-ry, 1959. 92 p. (MIRA 13:1)  
(Collective farms) (Wages and labor productivity)

BERZIN, A. I.

Berzin, A. I. - "Pre-sowing conditioning of the soil according to the system of  
academician V. R. Vilyams," Sel. Khos-vo Tadzhikistana, 1949, No. 6, p. 7-8

SO: U-3600, 10 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 6, 1949).

BERZIN, A.I.

USSR/Cultivated Plants - Technical, Oleaginous, Sugar-Bearing. L-5

Abs Jour : Ref Zhur - Biologiya, No 16, 25 Aug 1957, 69288

Author : Berzin, A.I., Yasheva, E.Ya.

Inst :

Title : Timing and Manner of Superphosphate Introduction in the Square-Nest Method of Cotton Plant Cultivation.

Orig Pub : S. Kh. Tadzhikistana, 1956, No 3, 20-27

Abst : In Tadzhikistan conditions the most advantageous plan of distributing cotton plants is 54 x 45 cm. In normal plant development in sowing in narrow rows, the main role is played by a correct system of irrigation and fertilizer addition. The most dangerous is an excess of irrigation and a one-sided use of nitrogenous fertilizers. The role of phosphorus is not alike in different periods of plant life. A lack of phosphorus during the period of fruit formation causes formation of small pods and lowers the yield. Experiments have shown that the

Card 1/2

BERZIN, A.I.

USSR/Cultivated Plants - Technical. Oleaginous. Sugar-Bearing. L-5

Abs Jour : Ref Zhur - Biologiya, No 16, 25 Aug 1957, 69290

Author : Berzin, A.I.

Inst :

Title : For Fields of Cotton Plants-- a Fertilized Plowing.

Orig Pub : S. kh. Tadzhikistana, 1956, No 12, 25-28

Abst : No abstract.

Card 1/1

BERZIN, Avgust Ivanovich; PONOMARENKO, A.A., red.; KUCHINSKIY, V., red.;  
POLTORAK, I., tekhn.red.

[Applying fertilizers to cotton plants] Udobrenie khlopchatnika.  
Stalinabad, Tadzhikskoe gos. izd-vo, 1958. 18 p. (MIRA 12:1)  
(Cotton--Fertilizers and manures)

TISHURA, V.I.; BERZIN, A.I.; IVANOV, G.P.

New type of tongs with built-in transformers. Avtom. svar.  
16 no.1:54-59 Ja '63. (MIRA 16:2)

1. Institut elektrosvariki imeni Ye.O. Patona AN UkrSSR.  
(Electric welding—Equipment and supplies)

TISHURA, V.I.; BERZIN, A.I.

New suspended machines for spot welding. Avtom. avar. 17  
no.9:61-65 S '64. (MIRA 17:10)

1. Institut elektrosvarki im. Ye.O. Patona AN UkrSSR.

BERZIN, A. K. Cand Phys-Math Sci -- (diss) "Study of the threshold energies of photoneutrons of certain isotopes of rare-earth elements." Tomsk, 1957.  
8 pp (Min of Higher Education USSR. Tomsk Order of Labor Red Banner Polytechnic Inst im S. M. Kirov), 100 copies (KL, 13-58, 92)

BERZIN, A.K.; MESHCHERYAKOV, R.P.; YAKOVLEV, B.M.

Space distribution of radiation from a betatron. Izv. vys. ucheb.  
sav.: fiz. no.4:130-134 '59. (MIRA 13:3)

1.Tomskiy politekhnicheskij institut imeni S.M. Kirova.  
(Betatron) (Bremsstrahlung)

S/139/59/000/05/023/026

E032/E114

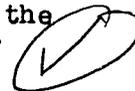
AUTHORS: Berzin, A.K., Meshcheryakov, R.P., and Yakovlev, B.M.

TITLE: Threshold Energies for the ( $\gamma$ , n) Reactions for Elements including Isotopes with 50 and 82 Neutrons

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1959, Nr 5, pp 148-153 (USSR)

ABSTRACT: The present work is a continuation of the work reported in Refs 1 and 2 by the first of the present authors. Threshold energies have been measured for 26 isotopes. Of these, 15 thresholds for photoneutrons have been measured for the first time and 8 have been measured with increased accuracy. The experimental error present in 4 of the thresholds measured in Ref 2 has been removed. A 25 MeV betatron was used as the source of the gamma radiation, and in the majority of cases the neutrons were detected as in Refs 1 and 2, using two scintillation counters in coincidence. The results obtained are summarised in Table 1 (p 152) in which the first column gives the name of the isotope, the fourth column gives the threshold measured in the present work (in MeV), the fifth column gives the threshold as measured by other

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1/3



S/139/59/000/05/023/026  
E032/E114

Threshold Energies for the ( $\gamma$ , n) Reactions for Elements  
including Isotopes with 50 and 82 Neutrons

workers, and the last column gives the references. The results are also shown in the form of graphs in Figs 2 and 3 (these include results of other workers). Fig 2 shows that the thresholds for even-even isotopes containing 50 neutrons lie on a single straight line (except for  $Zr^{90}$  which has two thresholds because of the presence of a metastable state). A similar situation is observed in the case of isotopes with 82 neutrons (Fig 3). Here the exception is the isotope  $Sm^{144}$ . In the case of the isotope  $Xe^{136}$  the threshold was measured with the aid of the apparatus shown schematically in Fig 1. The irradiated gas was in a metallic envelope A which was connected to the recording part of the apparatus B by means of a needle valve a. The recording of conversion electrons with energies of about 0.5 MeV which are formed as a result of the formation of a metastable state of Xe was carried out with the aid of a sodium iodide crystal.

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S/139/59/000/05/023/026

E032/E114

Threshold Energies for the ( $\gamma$ , n) Reactions for Elements  
including Isotopes with 50 and 82 Neutrons

There are 3 figures and 14 references, of which 9 are  
English and 5 Soviet. There is also 1 table.

ASSOCIATION: Tomskiy politekhnicheskiy institut imeni  
S.M. Kirova  
(Tomsk Polytechnical Institute imeni S.M. Kirov)

SUBMITTED: December 27, 1958

Card 3/3

BERZIN, A.K.; MESHCHERYAKOV, R.P.

( $\gamma$ , n)-Reaction thresholds for silicon isotopes. Zhur. eksp. i teor.  
fiz. 41 no.4:1013-1014 O '61. (MIRA 14:10)

1. Institut yadernoy fiziki, elektroniki i avtomatiki Tomskogo  
politekhnicheskogo instituta.  
(Nuclear reactions) (Silicon--Isotopes)

L 8377-65 EWI(m)/EWA(h) ASD(a)-5/AFWL

ACCESSION NR: AR4044031

S/0058/63/000/011/V022/V022

SOURCE: Ref. zh. Fizika, Abs. 11V153

AUTHOR: Berzin, A. K.; Meshcheryakov, R. P.; Shornikov, S. I.; Yakovlev, B. M.TITLE: The connection between the width of the giant resonance of the  $(\gamma, n)$ -  
reaction and filling of the energy levels of the nucleus

CITED SOURCE: Izv. Tomskogo politekhn. in-ta, v. 122, 1962, 14-18

TOPIC TAGS: isotope, threshold energy, giant resonance

TRANSLATION: Measures the threshold energies for certain isotopes of the Mo and Nd nuclei. Threshold energies in the  $(\gamma, n)$ -reaction for the isotopes Mo<sup>92</sup>, Mo<sup>94</sup>, Mo<sup>100</sup>, Nd<sup>142</sup>, and Nd<sup>150</sup> are determined by the method of induced activity, and for the isotopes Mo<sup>97</sup> and Nd<sup>145</sup>—by the method of direct neutron registration. The values of the threshold energies of the other isotopes were determined while processing the general curve of the yield of photon neutrons from all isotopes of a given element. It is shown that for isotopes each containing 8 neutrons above the filled shell.

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L 8377-65

ACCESSION NR: AR4044031

there are observed somewhat too high values of the threshold energies of the  $(\gamma, n)$ -reaction. There were also studied cross sections of the  $(\gamma, n)$ -reactions for isotopes of La, Ce, and Pr<sup>141</sup>, Nd, Nd<sup>142</sup>, and Nd<sup>150</sup>. The authors note that the insignificant difference in the widths of the giant resonances for the Nd<sup>150</sup> isotopes and nuclei having a filled neutron shell indicates slight deformation of the Nd<sup>150</sup> nucleus, since strongly deformed nuclei have high values for the giant resonance width. From this fact (together with data on the thresholds of the  $(\gamma, n)$ -reaction) the authors conclude that for the Nd<sup>150</sup> isotopes there is no filling of the  $237/2$  level or realization of any other configuration.

SUB CODE: NP

ENCL: 00

Card 2/2

L 8378-65 EWT(sm) DIAAP/RAEM(t)

ACCESSION NR: AR4044032

S/0058/63/000/011/V022/V022

SOURCE: Ref. zh. Fizika, Abs. 11V154

AUTHOR: Berzin, A. K.; Kolchin, A. Ya. B

TITLE: Angular distribution of photoneutrons<sup>19</sup> from Ta<sup>181</sup> and Bi<sup>209</sup>

CITED SOURCE: Izv. Tomskogo politekhn. in-ta, v. 122, 1962, 19-20

TOPIC TAGS: angular distribution, photoneutron, recoil proton, nuclear photoemulsion

TRANSLATION: Investigates the angular distribution of photoneutrons from Ta<sup>181</sup> and Bi<sup>209</sup>. As  $\gamma$ -radiation source is used a betatron with maximum energy  $E_{\gamma/\max} = 24$  Mev. Neutrons forming in the investigated specimens were recorded by means of recoil protons in nuclear photoemulsions of type NIKFI Ya-2 100 microns thick. In the case of Ta, the photographic plates were set at angles of 30, 60, 90, 120, and 150° to the direction of the  $\gamma$ -quanta beam; in the case of Bi there angles were

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L 8378-65

ACCESSION NR: AR404032

30, 60, 90, 115, 135, and 150°. The experimental points for Ta<sup>181</sup>, within limits of error, lie quite well on the curve  $0.36 + (0.65 \pm 0.1) \sin^2 \theta$  and for Bi<sup>209</sup> on the curve  $0.45 + 0.55 \sin^2 \theta$ .

SUB CODE: NP

ENCL: OG

Card 2/2

ACCESSION NR: AR4022438

S/0058/64/000/001/A037/A037

SOURCE: RZh. Fizika, Abs. 1A333

AUTHORS: Berzin, A. K.; Yakovlev, B. M.; Yatis, A. Q.

TITLE: Investigation of the neutron background of a 25-MeV betatron with the aid of nuclear emulsions

CITED SOURCE: Izv. Tomskogo politekhn. in-ta, v. 122, 1962, 21-26

TOPIC TAGS: betatron, betatron neutron background, nuclear emulsion technique, optimal Gamma ray dose, Gamma ray intensity, neutron flux, Gamma bremsstrahlung

TRANSLATION: Results are presented of measurements of the neutron background in the betatron laboratory of the Tomsk Polytechnic Institute with the aid of nuclear emulsions. Knowledge of the neutron background is essential in the study of photonuclear reactions, and

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ACCESSION NR: AR4022438

also when betatrons are used in medicine and biology. The measurement procedure is described in detail. Photographic plates with emulsions 100 and 200 microns thick were used. The optimal gamma-ray dose was 4--6 roentgens. To avoid errors due to the paper cover of the plates, the latter were irradiated without paper in a dark room. The constancy of the intensity of the gamma radiation was monitored with the aid of two ionization chambers. The neutron flux was measured at 12 points. Its maximum value was  $6.38 \times 10^4$  neutron/cm<sup>2</sup> per roentgen of gamma bremsstrahlung. V. Voronin.

DATE ACQ: 03Mar64

SUB CODE: PH

ENCL: 00

Card

2/2

BERZIN, A.K.; MESHCHERYAKOV, R.P.

Measuring the thresholds of the  $(\gamma, n)$ -reaction in  
silicon isotopes. Izv. TPI 122:30-32 '62. (MIRA 17:9)

BERZIN, A. K.; VITOZHEVTS, G. Ch.; SULIN, V. V.; SHORNIKOV, S. I.

"Gamma-activation analysis of rock samples."

report presented at Symp on Radiochemical Methods of Analysis, Salzburg, Austria,  
19-23 Oct 64.

BERZIN, A.O. (Leningrad, Suvorovskiy pr. d.63, kv.23)

Gunshot wounds of the chest. Vest.khir. 83 no.9:82-89 S '59.  
(MIRA 13:2)

1. Iz Voenno-meditsinskogo muzeya (nachal'nik - N.G. Kovalenko)  
Ministerstva oborony SSSR.

(THORAX, wds. & inj.)  
(WOUNDS, GUNSHOT)

VAYNSHTEYN, V.G., prof. (Leningrad, Kirovskiy prospekt, d.26/28, kv.6));  
BERZIN, A O.

Clinical aspects of treatment of brachipatellar periarthritis.  
Vest. Khir. no. 12:43-48 '62.

(MIRA 17:11)

BERZIN A. YA. (USSR)

"Effect of Molybdenum and Copper on some Biochemical Processes in the  
Kidney Bean *Phaseolus vulgaris*."

Report presented at the 5th Int'l Biochemistry Congress,  
Moscow, 10-16 Aug. 1961

HERZIN, B.J.

The kinetics of KJ-Tl luminescence. Acta physica Pol 26  
no.3/4:551-555 S-O '64.

1. Institute of Physics of the Academy of Sciences of the  
Latvian S.S.R.

BERZIN, B.K.

Suggestions concerning the testing of photographic materials for  
microphotography. Zhur.nauch.i prikl.fot. i kin. 5 no.6:455-456  
N-D '60. (MIRA 14:1)  
(Microphotography--Equipment and supplies)

GOFMAN, Ye.A.; VUL'FOVICH, R.D.; LOGACHEVA, V.A.; POLOZOV, A.I.; BERZIN, B.O., kand. tekhn. nauk, inzhener-polkovnik v otstavke, red.; KOZLOVTSEV, V.A., red.; YAKIMOVICH, Yu.K., red.-leksikograf; KUZ'MIN, I.F., tekhn. red.

[German-Russian dictionary of armored force terms] Nemetsko-russkii avtobronetankovyi slovar'. Pod red. B.O.Berzina. Moskva, Voen. izd-vo M-va obor. SSSR, 1961. 487 p. (MIRA 14:8)

(German language—Dictionaries—Russian)  
(Tanks (Military science)—Dictionaries)

L 19812-65 EAT(1)/SEC(b)-2 IJP(c)/AFNL/AS(pp)2/ESD(ES)

ACCESSION NR: AT5000407

S/3119/64/000/001/0163/0174

AUTHOR: Berzin', B. Ya.

TITLE: Study of the luminescence of the KI-Tl crystal. Part 1. Excitation in the absorption band corresponding to transitions from super 1 S sub zero to super 3 P sub 1

SOURCE: AN LatSSR. Institut fiziki. Radiatsionnaya fizika, no. 1, 1964. Ionny\*ye kristally\* (Ionic crystals), 163-174

TOPIC TAGS: luminescence, intracenter luminescence, thallium impurity, potassium iodide crystal, SP transition, quenching time

ABSTRACT: The object of the work was to pursue the study of the kinetics of intracenter luminescence of the KI-Tl crystal in the 79-300K range. Oscillography of single luminescence pulses was used. A scintillation KI-Tl crystal was excited in the 282 m $\mu$  absorption band. It was found that, as in the case of KCl-Pb, the luminescence pulses at low temperatures have a short and a long component in the KI-Tl crystal. The intensities of both components were studied as a function of the excitation and emission wavelength at various temperatures of the crystal. The intensity of the short component and the quenching time of the long component were also studied as a function of the crystal temperature. By

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I. 19812-65

ACCESSION NR: AT5000407

comparing the experimental data obtained with the calculated data, the author determined the parameters of the luminescence center. Orig. art. has: 10 figures and 11 formulas.

ASSOCIATION:None

SUBMITTED: 18Mar64

ENCL: 00

SUB CODE: SS

NO REF SOV: 011

OTHER: 007

Card 2/2

L 19613-65 EFT(1)/EBC(b)-2 IJP(c)/AFWL/AS(mp)-2/ESD(gs)

ACCESSION NR: AT5000408

S/3119/64/000/001/0175/0180

AUTHOR: Berzin', B. Ya.

TITLE: Study of the luminescence of the KI-Tl crystal. Part 2. Excitation in the absorption band corresponding to transitions from super 1 S sub zero to super 1 P sub 1

SOURCE: AN LatSSR Institut fiziki. Radiatsionnaya fizika, no. 1, 1964. Ionny\*ye kristally\* (ionic crystals), 175-180

TOPIC TAGS: luminescence, intracenter luminescence, thallium impurity, potassium iodide crystal, SP transition

ABSTRACT: The kinetics of the luminescence of the KI-Tl crystal were studied with excitation in the 282 m $\mu$  band ( $^1S_0 \rightarrow ^3P_1$ ) and the 233 m $\mu$  band ( $^1S_0 \rightarrow ^1P_1$ ), in the range of 80 to 300K. The luminescence spectra of the short and long component of the pulse were recorded. The emission spectra of the two components were found to coincide, and are therefore assumed to be related to the same energy levels of the luminescence center. The parameters of the luminescence center were calculated for both cases of excitation (282 and 233 m $\mu$ ) and were found to be the same within the limits of error. It is concluded that the mechanism of activator luminescence of 425 m $\mu$  with excitation in the 282 and 233 m $\mu$  bands is the same. Orig. art. has: 5 figures and 1 table.

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I. 19813-65

ACCESSION NR: AT5000408

ASSOCIATION: None

SUBMITTED: 18Mar64

ENCL: 00

SUB CODE: SS

NO REF SOV: 005

OTHER: 005

Cord 2/2

L 19811-65 EWT(1)/EEC(b)-2 IJP(c)/AFWL/AS(mp)-2/ESD(gs)

ACCESSION NR: AT5000409

S/3119/64/000/001/0181/0185

AUTHOR: Berzin, B. Ya.

TITLE: Study of the luminescence of the KI-Tl crystal. Part 3. Excitation in the exciton absorption band

SOURCE: AN LatSSR. Institut fiziki. Radiatsionnaya fizika, no. 1, 1964. Ionny\*ye kristally\* (Ionic crystals), 181-185

TOPIC TAGS: Luminescence, intracenter luminescence, thallium impurity, potassium iodide crystal, exciton band

ABSTRACT: The object of the work was to study the transfer of energy from the main substance to the activator in a KI-Tl scintillation crystal with excitation in the excitation absorption band of 216 m $\mu$  from 80 to 160K. The technique employed was oscillography of single luminescence pulses excited by a copper spark. A study of the shape of these pulses with excitation in the exciton band showed that the pulse has a short and a long component, as in the case of the intracenter excitation of Tl<sup>+</sup> ions. On the basis of a comparison with the latter case, the author concludes that in transferring their energy to the activator centers, the excitons populate mostly the lower excited level <sup>3</sup>P<sub>0</sub>. "In conclusion, the author

Card 1/2

L 1981h-65

ACCESSION NR: AT5000409

expresses his deep appreciation to I. K. Plyavin<sup>2</sup> for supervising the work and to A. P. Launert for his assistance." Orig. art. has: 3 figures and 2 formulas.

ASSOCIATION: None

SUBMITTED: 18Mar64

ENCL: 00

SUB CODE: SS

NO REF SOV: 007

OTHER: 006

Card 2/2

L 26663-66 EWT(m) DIAAP JD/JG

ACC NR: AT6010458

SOURCE CODE: UR/3119/65/000/003/0075/0082

AUTHORS: Berzin', B. Ya.; Plyavin', I. K.

ORG: none

57  
Bxl

TITLE: Gamma scintillations<sup>19</sup> of CsI-Tl

SOURCE: AN LatSSR. Institut fiziki.<sup>27</sup> Radiatsionnaya fizika, no. 3,<sup>27</sup>  
1965. Ionye kristally (Ionic crystals), 75-82

TOPIC TAGS: cesium compound, iodide, activated crystal, scintillator, gamma detector, exciton, temperature dependence, *scintillation, crystal growth*

ABSTRACT: The authors present data on the damping of  $\gamma$  scintillations as compared with the damping of the intracenter and exciton scintillation of the CsI-Tl crystal with a definite activator concentration. The duration of the  $\gamma$  scintillation was measured as a function of the crystal temperature. The crystals were grown by the Stockbarger method and exposed to  $\gamma$  rays from  $Co^{60}$ . The experimental conditions were such that the scintillations were produced by Compton electrons. The measurements were made in a cryostat in which the temperature could be varied from room temperature to 130K. The  $\gamma$  scintillations produced in the crystal were recorded with a photomultiplier. Analysis of the  $\gamma$  scintil-

Card

1/2

2

L 26663-66

ACC NR: AT6010458

0

lation waveform showed it to consist of several components with different damping times. A two-stage attenuation, with damping times 1.1 and 2.5  $\mu$ sec, was observed at room temperature. The durations of the  $\gamma$  scintillations are compared with those of previously investigated intracenter and exciton scintillations, and certain hypotheses are advanced regarding the mechanism transferring the energy from the main substance to the activator and causing the different components of the  $\gamma$  scintillations. It is assumed that each of the  $\gamma$  components is due to a different energy-transfer mechanism. It is pointed out that the conclusions are still tentative and further research is necessary. Orig. art. has: 1 figure and 2 formulas.

SUB CODE: 20/ ORIG REF: 010/ OTH REF: 011/ SUBM. DATE: 00

Card

2/2

BLG

L 45170-66 EWT(m)/EWP(t)/ETI IJP(c) JD/JG  
ACC NR: AP6027892 SOURCE CODE: UR/0371/66/000/003/0015/0018

40  
38  
B

AUTHOR: Berzin', B. Ya.--Berzina, B.

ORG: Institute of Physics, AN Latv. SSR (Institut fiziki AN Latv. SSR)

TITLE: The delay component in Gamma-scintillations of the CsI-Tl crystal

*и — и*

SOURCE: AN LatSSR. Izvestiya. Seriya fizicheskikh i tekhnicheskikh nauk, no. 3, 1966, 15-18

TOPIC TAGS: luminescent crystal, cesium iodide, gamma luminescence, photoluminescence, thalium, luminescence center, *Cesium compound, IODIDE*

ABSTRACT: According to the literature, the decay component of gamma-scintillations at room temperatures is characterized by different decay times. The purpose of the present work is to investigate whether the decay component of gamma-scintillations is dependent upon the activator Tl, or on some other luminescent centers in the CsI-Tl crystal. The author examines CsI-Tl crystals with the real concentrations of 0.14; 0.5; 0.7; 2.9; 6.15 x 10<sup>-2</sup> mol% and the nonactivated CsI crystal. The method of studying the luminescence kinetics of these crystals is used. The studies were conducted during gamma-excitation as well as

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L 45170-66

ACC NR: AP6027892

2

during photo-excitation in the temperature range from 210 to 300K. The photo-scintillations were activated through an SPM-1 monochromator with a quartz prism by short flashes ( $\sim 10^{-7}$  sec) of a high-voltage spark. The luminescence pulses through ZhS-4 and ZhS-17 light filters were recorded by an M12FQ35 photomultiplier, and the gamma-scintillations by M12FQ35 and FEU-12A photomultipliers. Single gamma- and photo-scintillations were obtained on the DESO-1 two-beam speed oscillograph. It is found that the centers responsible for luminescence with a delay time of 8  $\mu$ sec are observed in the CsI-Tl crystal as well as in the CsI crystal and, consequently, are not the centers of the Tl activator. The nature of these centers has not been established conclusively. It is, therefore, desirable to have detailed investigations made of luminescence centers responsible for the 8- $\mu$ sec emission components in order to regulate as much as possible their presence in scintillation crystals. Orig. art. has: 3 figures. [26]

SUB CODE: 20/ SUBM DATE: 23Jul65/ ORIG REF: 005/ OTH REF: 005/ ATD PRESS: 5081

Card 2/2 *pld*

BERZIN', E. [Berzins, E.], преподаvatel'

Let's disseminate information about radio. Radio no.8:8-9  
Ag '62. (MIRA 15:8)

1. Smiltenkiy sel'skokhozyaystvennyy tekhnikum Latviyskoy SSR.  
(Radio clubs) (Radio operators)



BERZIN, G., inzh.; ZHURAVLEV, S., inzh.; TURKIN, V., inzh.

Radiant heating of apartment houses. Zhil. stroi. no.5:21-23  
'62. (MIRA 15:6)  
(Radiant heating) (Apartment houses)

BERZIN, Il'ya Vasil'yevich; DENISOV, Yevgeniy Timofeyevich;  
EMANUEL', Nikolay Markovich; KOROBTSOVA, N.A., red.;  
KOZLOVA, T.A., tekhn. red.

[Oxidation of cyclohexane] Okislenie tsiklogeksana. Moskva,  
Izd-vo Mosk. univ. 1962. 301 p. (MIRA 16:1)  
(Cyclohexane) (Oxidation)

~~BERZIN', Ivan Andrevevich [Bērziņš, J.], prof.; RIVKIND, T.L., red.;~~  
ATROSHCHENKO, L.Ye., tekhn.red.

[Achievements of livestock raisers of the Latvian S.S.R.] Uspehi  
zhivotnovodov Latviiskoi SSR. Moskva, Izd-vo "Znanie," 1959.  
22 p. (Vsesoiuznoe obshchestvo po rasprostraneniu politicheskikh  
i nauchnykh znani. Ser.5, Sel'skoe khoziaistvo, no.27).  
(MIRA 12:9)

(Latvia--Stock and stockbreeding)

UL'ST, V.[Ulsts, V.]; BERZIN', L.[Berzins, L.]

Traces of frost deformation in the Tetele Triassic sands of the Jelgava region. Vestis Latv ak no.6:93-97 '61.

1. Akademiya nauk Latvyskoy SSR, Institut geologii.

(Jelgava region—Sand)

BERZIN, M. ; KRAJZMER, L. ; SOKOLOW, W.

Prospects of using television in transportation. Tr. from  
the Russian. p. 197. PRZEGLAD KOLEJOWY, Warszawa. Vol. 8,  
no. 5, May 1956.

SOURCE:

East European Accession List (EEAL) Library of Congress  
Vol. 5, no. 8, August 1956.

BERZIN, M., inzh.-mayor svyazi

Promoting radio communications on railroads. Zhel. dor. transp.  
no.1:37-43 '47. (MIRA 13:2)  
(Railroads--Communication systems)

1947, p.

Vnedreniye i razvitiye na dodezheniye krovni. Trudovye [?]. (Zhurnal, transport, 1947, no. 1, p. 37-38). OLS: 427.25

SO: Soviet Transportation and Communication, a bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

BERZIN', M. [A]

3568. BERZIN', M. Opyt Peredovikov Povysheniyyu Udoya-Ya. Vigant Opyt Po Silosovaniyu Kornov. Riga, Izd-vo Akad. Nauk Latv. S.S.R., 1954. 44s. s ill. 20sm (Akad Nauk Latv. SSSR Int Zsotekhniki Zoogigiyeny Seriya Nauch-Popul Proiyevedeniy). 3,000ekz 75k.-Naobl Avt No Ukazany-Na Obl Zagl: Opyt Peredovikov Po Povysheniyu Udoya i Silosovaniyu Kornov.-Na Latysh. Yaz-(54-56726) 636.2.083 stt631.563.5) (47.43)

SO: Knizhnaya Letopis', 1955

REUTT, Yevgeniy Konstantinovich; KHAZANOV, Lev Yefimovich; BERZIN, M.A.  
inzhener, redaktor; STROGANOV, L.P., inzhener, redaktor; VERINA,  
G.P., tekhnicheskiy redaktor

[Radio engineering] Radiotekhnika. Moskva, Gos. transp. zhel-  
dor. izd-vo, 1955. 367 p. (MIRA 9:3)  
(Radio)

BERZIN, M.

Radio-communication in railway transport. Radio no. 12:57 D '55.  
(Railroads--Communication systems) (MIRA 9:4)

BERZIN, M.A., inzhener; KRAYMER, L.P., kandidat tekhnicheskikh nauk;  
SOKOLOV, V.F., inzhener.

Prospective application of television to railroad transport. Zhel.  
dor.transp. 37 no.12:71-74 D '55. (MLRA 9:5)  
(Railroads--Communication systems) (Television)

USTINSKIY, A.A., kandidat tekhnicheskikh nauk; BERZIN, M.A., inzhener.

Radio equipment for trains with selector calls. Zhel.dor.transp.37  
no.4:74-77 Ap '56. (MLRA 9:7)  
(Railroads--Communication systems)

KOLOKOL'NIKOV, A.N., inzhener; BERZIN, M.A., inzhener.

The first radio relay communication system. Zhel.dor.transp. 37  
no.6:46-49 Je '56. (MIRA 9:8)

(Railroads--Communication systems)

(Radio relay systems)